EXAMINING THE USE OF WEB-BASED TESTS FOR TESTING ACADEMIC VOCABULARY IN EAP INSTRUCTION

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Abstract

Interest in Web-based and computer-assisted language testing is growing in the field of English for academic purposes (EAP). In this study, four groups of undergraduate EAP students (n=120), each group consisted of 30 students, were randomly selected from four different disciplines, i.e. biology, political sciences, psychology, and law. The four groups were homogeneous regarding their English proficiency. Four course-specific web-based tests of academic vocabulary were administered to each group with regard to their specific disciplines. Questionnaires were employed to explore the EAP students' perceptions and self-efficacy concerning web-based language testing. Also, the perceptions of the four groups of undergraduates were compared in order to identify the differences among their attitudes. The findings would have implications for renewing assessment approaches and methods used in EAP instruction.

Keywords: Web-based testing; attitudes; EAP; academic vocabulary; assessment

1. Introduction

The use of the Internet has had a considerable impact on educational practices of teachers and students (Peng, Tsai, & Wu, 2006). In the realm of assessment and testing, the Internet can offer cost-effective and quick assessment services. Nowadays, many educational institutions and universities strive to train their teachers to be able to use the Internet and Web-based resources in their teaching and testing practices effectively. Similarly, the use of the Internet for learning English as a foreign language (EFL) has attracted the attention of many Iranian EFL researchers and scholars (Dashtestani, 2014a; Son, 2004).

The present study explored the effectiveness of Web-based tests for the field of English for academic purposes instruction since the use of technology and the Internet can facilitate the process of learning academic English (Dashtestani, 2014b).

2. Background

The application of computer-assisted language learning (CALL) and technology-enhanced language teaching has gained widespread popularity recently. Web-based language learning

(WBLL) is included in CALL and it involves the use of the Web and exploits Web materials, resources, applications or tools. As for the application of the World Wide Web in the field of language education, Son (2004) argues that the Internet has widened students' learning choices and enabled them to discover learning materials themselves and have easy access to online applications and learning resources. In addition, in the field of language testing, there is a growing interest in the application of computers and the World Wide Web to assess learners' language achievement (Alderson, 2001; Bachman et al., 2000; Douglas, 2000; Malone, Carpenter, Winke, & Kenyon, 2001; Roever, 2001).

Wainer (1990) maintains that psychometricians are enthusiastic about the integration of computers in language assessment since computers allow testing experts to apply item response theory for designing adaptive tests. In adaptive tests, the ability of test takers will be assessed more quickly and with more accuracy compared to paper-and-pencil tests (Wainer, 1990). Apart from adaptive tests, the use of computers in language testing has various advantages. The use of computer-based tests (CBT) is not constrained by logistical considerations since CBTs can be administered at any time unlike paper-and-pencil tests. CBTs also provide immediate feedback for learners upon completion of the test. CBTs provide immediate feedback on each test taker's responses which offers a plethora of pedagogical benefits for testing stakeholders. Moreover, CBTs allow test designers to include multimedia features in tests which will enhance the quality of the test (Roever, 2001).

There are some drawbacks concerning the application of CBTs. CBTs may introduce construct-irrelevant variance since some students might be more familiarized with computers than the others. The high costs of establishing new testing centers and the possibility of occurrence of computer breakdowns are the other important shortcomings of CBTs (Kirsch, Jamieson, Taylor, & Eignor, 1998).

According to Roever (2001), a Web-based test is a kind of assessment instrument which is designed and written based on the language of the Web. It consists of several HTML files which can be downloaded by the users. The whole test or some items can be downloaded. The test-takers would take the test on their personal computer and send the responses to the server to receive a result or score. The feedback can be adapted to the needs and preferences of the test-taker.

Regarding the application of WBTs in language learning environments, it has been warned that test takers' familiarity with computers may have an impact on their test scores and introduce some construct-irrelevant variance (Kirsch et al., 1998). Training students to enhance their computer familiarity may eliminate this problem (Taylor, Jamieson, Eignor, &

Kirsch, 1998). Some other issues might be included when using WBTs, including different typing speeds on the part of test takers, delivery failures and speediness, and the loading time (see Roever, 2001).

As for the literature on the attitudes of test takers toward CBT and WBT, several studies have reported on the positive attitudes of test takers toward CBTs/WBTs and that learners prefer CBTs/WBTs to paper-and-pencil tests for reasons such as time efficiency, focusing attention, enjoyment and confidentiality (Bresolin, 1984; Boo, 1997; Harrel, Honaker, Hetu, & Oberwager,, 1987; Levin & Gordon, 1989; Powers & O'Neill, 1992; Vincino & Moreno, 1988). However, some studies have revealed the negative experiences and attitudes of learners toward computerized tests (Ward, Hooper, & Hannafin, 1989).

As cited in Sam, Othman, and Nordin (2005), "self-efficacy reflects an individual's confidence in his/her ability to perform the behavior required to produce specific outcome and it's thought to directly impact the choice to engage in a task, as well as the effort that will be expended and the persistence that will be exhibited" (Kinzie, Delcourt, & Powers, 1994, p. 747). Higher levels of self-efficacy motivate learners to be more active in the use of computers and technology. Therefore, it can be concluded that there is a close association among computer attitudes, literacy and self-efficacy. The higher the level of computer self-efficacy, the more confident the student will be in the use of computers.

The Internet and CALL have not been integrated in the Iranian EAP instruction since EAP courses are strictly text-centered and examination-oriented (Mazdayasna & Tahririan, 2008). In vocabulary teaching and testing, computers may offer significant benefits that paper-based materials do not (Ellis, 1995; Hulstijn, 2001; Nation, 2001). Moreover, it seems that there is scant research in the field of EAP/EFL on the use of technology in testing vocabulary. Accordingly, few studies have investigated the application of WBT for the assessment of academic vocabulary in EAP contexts both in Iran and other countries. Therefore, this study was conducted to examine the attitudes of Iranian EAP test takers towards Web-based testing of academic vocabulary and their self-efficacy levels.

3. The study

3.1. Research questions

The study attempted to answer the following questions:

1. What are the attitudes of EAP students from different disciplines towards the application of web-based language tests of academic vocabulary in their EAP courses? Is there any significance difference among their attitudes?
2. What are the perceptions of EAP students from different disciplines of their self-efficacy when using web-based language tests of academic vocabulary in EAP courses? Is there any significant difference among their perceptions?
3. What are the perceptions of EAP students from different disciplines of the limitations of web-based language testing of academic vocabulary? Is there any significant difference among their perceptions?

3.2. Participants

A sample of 120 undergraduates, in form of four groups of 30 undergraduates from four different disciplines, i.e. biology, political sciences, psychology, and law, participated in the study. The groups of 30 students were randomly chosen from five major Iranian universities: Tarbiat Moalem University of Tehran, Islamic Azad University- Karaj Branch, Islamic Azad University- Shahre Ghods Branch, Payame Noor University of Tehran, and Islamic Azad University- South Tehran Branch. A paper-based test of TOEFL was administered to ensure the homogeneity of the participants concerning their English proficiency. The sample comprised 62 males and 58 females with an age average of 20-25.

3.3. Design and procedure

The first instrument of the study was a questionnaire. First of all, the previous literature was used to provide a list of items related to EAP and Web-based testing. The literature comprised EAP-related literature, including Hutchinson and Waters (1987) and web-based language testing literature (Alderson, 2001; Bachman et al., 2000; Douglas, 2000; Malone, Carpenter, Winke, Kenyon, 2001; Roever, 2001). Afterwards, interviews with 20 EAP students (5 students from each discipline under study) and 5 EAP instructors were conducted to enrich the list of items and get more familiar with the needs and preferences of the participants of the study. The items of the questionnaire were then sent to a panel of six EFL and EAP instructors to establish the content validity of the instrument. In order to ensure full understanding on the part of the respondents and avoid any misinterpretation, the questionnaire was developed in the respondents' native tongue (i.e. Persian). The Cronbach’s Alpha analyses were conducted and a high range of reliability indices (0.82-0.91) was achieved.

The questionnaire developed for this study comprised five sections with a sum of 33 items. The first section was designed to examine the students' perceptions of their level of self-efficacy regarding taking a web-based test on a four-point Likert scale (from *not confident* to *very confident*). The second section explored the attitudes of the students toward the experience of web-based testing on a four-point Likert scale (from *do not agree* to *strongly agree*).The third section was developed to investigate the students' perceptions of the limitations of using web-based tests in EAP courses. This section was based on a four-point Likert scale ranging from *do not agree* to *strongly agree*.

The other instrument of the study was a web-based test. The website contained different academic vocabulary tests for different majors including Arts, Biology, Business, Education, Health/Medicine, Law, Literature, Politics/Government, Psychology/Sociology, and Technology. Each major-specific test included 25 multiple-choice questions the grades of which were submitted to the participants' emails.

First the EAP students were given the web-based test. Immediately, questionnaires were administered to them to assess their perceptions about the web-based test. The results of the questionnaire were analyzed using the mean, standard deviation, and frequency of responses to each item of the questionnaire. The Kruskal-Wallis test was also used to detect the differences among the perceptions of different groups of participants. SPSS 16 was used to analyze the results of the questionnaire.

3.4. Results

3.4.1. EAP students' attitudes toward the web-based test

The first section of the questionnaire contained 14 items to investigate the attitudes of the four groups of EAP students towards the WBT of academic vocabulary. It was revealed that the majority of students had positive attitudes toward some merits of WBTs, including ease of taking Web-based tests, low anxiety levels, high level of motivation, immediate feedback, multimedia features, energy effectiveness, ubiquitous opportunity to take the test, user-friendliness, accuracy of scoring, and provision of feedback for each item.

Based on the results of the Kruskal-Wallis test, the participants had significantly different perceptions regarding several items, including "it is easy to take a web-based test", "I feel less anxious taking a web-based test", "I receive well-designed and high-quality feedback taking a web-based test", "it is energy-saving taking a web-based test", "a web-based can be taken both in a class and at home", "web-based test scoring is accurate and

error-free", "a web-based test is user friendly", "a web-based test provide students with feedback on every item", and "it is possible to replace traditional paper-and-pencil tests with WBTs".

Table 1. EAP students' attitudes toward the web-based test

Items	Responses on a Likert Scale						
	Participants	1	2	3	4	Mean	t
1. It is easy to take a web-based test	B	2	3	4	21	3.47	
	PS	2	3	2	23	3.53	
	L	2	4	3	21	3.43	
	P	1	2	2	25	3.7	t=0.00
2. I feel less anxious taking a web-based test	B	1	2	5	22	3.6	
	PS	0	3	6	21	3.6	
	L	2	3	6	19	3.4	
	P	0	4	8	18	3.47	t=0.00
3. I feel motivated taking a web-based test	B	0	0	2	28	3.93	
	PS	0	2	1	27	3.83	
	L	0	1	1	28	3.9	
	P	0	1	1	28	3.9	t=0.09
4. It is time-saving to take a web-based test	B	0	2	2	26	3.8	
	PS	0	2	1	27	3.83	
	L	1	1	3	25	3.73	
	P	1	1	1	27	3.7	t=0.19
5. I receive immediate feedback taking a web-based test	B	0	0	0	30	4	
	PS	0	0	0	30	4	
	L	0	0	2	28	3.93	
	P	0	0	0	30	4	t=11
6. I receive well-designed and high-quality feedback taking a web-based test	B	26	3	1	0	1.16	
	PS	25	4	1	0	1.2	
	L	27	3	0	0	1.1	
	P	28	2	0	0	1.06	0.03
7. Multimedia features can be used in a web-based test	B	0	1	2	27	3.87	
	PS	0	1	1	28	3.9	
	L	0	1	3	26	3.83	
	P	0	1	1	28	3.9	t=0.19
8. It is energy-saving to take a web-based test	B	1	3	4	22	3.57	
	PS	0	0	4	26	3.87	
	L	1	1	5	23	3.7	

	P	1	4	4	21	3.5	t=0.00
9. A web-based test can be administered every time	B	0	0	2	28	3.93	
	PS	0	0	0	30	4	
	L	0	1	2	27	3.87	
	P	0	1	1	28	3.83	t=0.09
10. A web-based test can be taken both in a class and at home	B	0	0	2	28	3.93	
	PS	0	0	0	30	4	
	L	0	1	1	28	3.9	
	P	0	1	2	27	3.83	t=0.04
11. Web-based test scoring is accurate and error-free	B	2	1	1	26	3.7	
	PS	1	2	2	25	3.7	
	L	0	1	3	26	3.83	
	P	2	2	2	24	3.57	t=0.00
12. A web-based test is user friendly	B	1	1	5	23	3.67	
	PS	3	4	2	21	3.37	
	L	2	5	4	19	3.3	
	P	2	3	4	21	3.5	0.00
13. A web-based test provides students with feedback on every item	B	2	3	4	21	3.47	
	PS	2	4	6	18	3.33	
	L	5	4	5	16	3.06	
	P	4	3	6	17	3.27	t=0.00
14. It is possible to replace traditional paper-and-pencil tests with WBTs	B	4	2	3	21	3.37	
	PS	2	3	3	22	3.5	
	L	1	2	3	24	3.67	
	P	1	1	3	25	3.7	t=0.00

Note: In this section of the questionnaire, 4 point Likert scale items, i.e. *1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree*, were included ($P \leq 0.05$).

3.4.2. EAP students' perceptions of their self-efficacy to take the Web-based test

The second section of the questionnaire (10 items) explored the levels of self-efficacy of EAP students while taking a WBT. The majority of EAP students reported that they were competent and confident in "answering the questions within the time-limit provided", "using the keyboard to type the correct response", "knowing how to answer the web-based test questions", "using their background knowledge while taking the WBT", "navigating the webpage to answer the questions", "guessing the meaning of academic words while using the Web", and "not being distracted while taking the web-based test".

Based on the results of the Kruskal-Wallis test, the participants had significantly different perceptions regarding some items, including “answering the questions within the time-limit provided”, “using the keyboard to type the correct response”, “knowing how to perform when facing server failure”, “guessing the meaning of academic words while I am using the Web”, “overcoming anxiety/stress while taking the web-based test”, and “not to be distracted while taking the web-based test”.

Table 2. EAP students’ perceptions of their self-efficacy to take the web-based test

I feel confident and competent to

Items	Responses on a Likert Scale						
	Participants	1	2	3	4	Mean	t
1. answer the questions within the time-limit provided	B	11	3	1	15	2.67	
	PS	14	0	0	16	2.6	
	L	10	1	0	19	2.93	
	P	17	2	0	11	2.17	t=0.00
2. use the keyboard to type the correct response	B	0	0	2	28	3.93	
	PS	0	0	2	28	3.93	
	L	0	2	4	24	3.73	
	P	1	1	5	23	3.67	t=0.00
3. know how to answer the web-based test questions	B	0	1	3	26	3.93	
	PS	0	1	2	27	3.83	
	L	2	0	2	26	3.9	
	P	1	0	1	28	3.9	t=0.16
4. use my background knowledge while I am using the Web	B	7	0	2	21	3.23	
	PS	1	5	5	19	3.4	
	L	7	0	0	23	3.3	
	P	3	4	5	18	3.27	t=0.37
5. navigate the webpage to answer the questions	B	0	0	1	29	3.97	
	PS	0	0	0	30	4	
	L	1	0	0	29	3.9	
	P	0	0	0	30	4	t=0.39
6. know how to perform when facing server failure	B	27	3	0	0	1.1	
	PS	26	3	1	0	1.17	
	L	25	3	2	0	1.23	
	P	23	4	2	1	1.37	t=0.00
7. know how to perform when facing browser incompatibility	B	28	2	0	0	1.07	
	PS	23	3	2	2	1.43	
	L	25	4	1	0	1.2	

	P	23	3	2	2	1.43	t=0.00
8. guess the meaning of academic words while I am using the Web	B	3	1	1	25	3	
	PS	3	3	3	21	3	
	L	3	4	5	17	3	
	P	1	2	8	19	1	t=0.03
9. overcome my anxiety/stress while I am taking the web-based test	B	28	2	0	0	1.07	
	PS	24	3	2	1	1.33	
	L	30	0	0	0	1	
	P	30	0	0	0	1	t=0.00
10. not to be distracted while taking the web-based test	B	2	3	3	22	3.5	
	PS	4	0	5	21	3.43	
	L	0	2	4	24	3.73	
	P	2	2	3	23	3.53	t=0.01

Note: In this section of the questionnaire, 4 point Likert scale items, i.e.*1. Not confident, 2. Somewhat confident, 3. Confident, 4. Very confident,* were included ($P \leq 0.05$).

3.4.3. EAP students' perceptions of the limitations of the Web-based test

The third section of the questionnaire (9 items) explored the perceptions of EAP students of the limitations of a WBT of academic vocabulary. The majority of EAP students perceived "more familiarity of some students with WBTs", "the anxiety-causing nature of WBTs", and "the lack of informative feedback provided by a computer" as the limitations of a WBT.

Based on the results of the Kruskal-Wallis test, the participants had significantly different perceptions regarding some items, including "it is necessary to receive adequate supervision by the teacher while taking a WBT", "some test takers are more familiar with computers than the others and this is not fair"," the possibility of the occurrence of computer breakdown", "Taking a web-based test causes anxiety on the part of test takers", and "web-based testing scoring system is not trustable".

Table 3. EAP students' perceptions of the limitations of Web-based testing

Items	Responses on a Likert Scale						
	Participants	1	2	3	4	Mean	t
1. There is a high risk of server failure while taking a WBT	B	19	4	4	3	1.7	
	PS	18	3	5	4	1.83	
	L	17	6	4	3	1.77	
	P	16	8	4	2	1.73	t=0.24

2. There is a high risk of browser incompatibility	B	27	3	0	0	1.1	
	PS	28	1	1	0	1.1	
	L	28	2	0	0	1.06	
	P	30	0	0	0	1	t=0.15
3. It is necessary to receive adequate supervision by the teacher while taking a WBT	B	24	5	1	0	1.23	
	PS	27	3	0	0	1.1	
	L	22	4	2	2	1.47	
	P	20	4	4	2	1.6	t=0.00
4. Some test takers are more familiar with computers than the others and this is not fair	B	1	1	1	27	3.8	
	PS	1	2	3	24	3.67	
	L	1	2	6	21	3.57	
	P	0	2	6	22	3.67	t=0.01
5. There is a possibility of the occurrence of computer breakdown	B	21	5	2	2	1.5	
	PS	22	3	3	2	1.5	
	L	19	2	3	6	1.87	
	P	17	2	4	7	2.03	t=0.00
6. Taking a web-based test is time-consuming	B	30	0	0	0	1	
	PS	29	1	0	0	1.03	
	L	28	2	0	0	1.07	
	P	28	2	0	0	1.07	t=0.19
7. Taking a web-based test causes anxiety on the part of test takers	B	0	0	3	27	3.9	
	PS	0	1	1	28	3.9	
	L	0	2	3	25	3.77	
	P	0	3	3	24	3.7	t=0.00
8. Web-based testing scoring system is not trustable	B	28	2	0	0	1.07	
	PS	29	1	0	0	1.03	
	L	26	4	0	0	1.13	
	P	25	4	1	0	1.2	t=0.01
9. The feedback provided by the computer is not informative enough	B	0	0	1	29	3.97	
	PS	0	0	0	30	4	
	L	0	0	1	29	3.97	
	P	0	0	0	30	4	t= 0.39

Note: In this section of the questionnaire, 4 point Likert scale items, i.e. *1. Strongly disagree, 2. Disagree, 3. Agree, 4. Strongly agree*, were included ($P \leq 0.05$).

4. Discussion and conclusion

This study sheds light on EAP students' attitudes towards the implementation of Web-based testing in EAP instruction. The findings illustrated that Iranian EAP students are generally

positive about the use of Web-based tests in the EAP context of Iran even though some differences were identified regarding the participants' perspectives. The findings are in line with the previous studies which identified the positive perceptions of EFL/EAP students about web-based testing (Bresolin, 1984; Boo, 1997; Harrel et al., 1987; Levin & Gordon, 1989; Powers & O'Neill, 1992; Vincino & Moreno, 1988). As the use of the Internet and online resources has gained tremendous popularity in the Iranian context of EAP instruction (Dashtestani, 2014a; Dashtestani, 2014b), the results of this study can have direct implications for EAP curriculum developers and course designers. It appears that the use of the Internet has enormously been researched for EAP instruction in Iran, while EAP testing has remained as peripheral and uninvestigated in Iran and other countries. Since EAP instruction is based on the perceptions and needs of EAP learners, EAP courses should be designed based on meticulous needs-analysis projects on students' current and potential abilities. The use of the Web can facilitate students' critical thinking skills and enable them to learn more actively and interactively (Dashtestani, 2014b). The positive attitudes of Iranian EFL students are a key factor in the implementation of CALL in Iran since Jones (2001) argues that CALL cannot be applied in EFL courses when the attitudes of teachers and students are not positive toward it. Considering the pivotal role of EAP students in language teaching contexts, EFL students who take positive attitudes toward technology can be encouraged to use computer-based and Web-based resources for their learning.

In addition, it is essential that EAP teachers strive to use more interactive and technology-enhanced testing methods and approaches in their assessment procedures. Without the attention and interest of teachers, the implementation of Web-based testing would not be feasible in the Iranian EAP context. One significant impediment concerning the integration of Web-based testing in the context of Iran might be related to teachers' lack of knowledge of technology and its application for their teaching practices (Dashtestani, 2014b). It can be suggested that EAP authorities and decision-makers adopt some measures and strategies to enable teachers to use and develop Web-based tests for their assessment purposes. One of the most appropriate measures would be associated with considering Web-based testing workshops to encourage and enable teachers to be more familiar with the use of the Internet for testing and assessment. The other crucial issue is the lack of access to appropriate Web-based tests which can be used for the specific purposes of EAP courses. To solve this problem, there should be cooperation between computer experts and language teaching specialists to design localized and context-specific Web-test tests. Apparently, teachers should enhance their knowledge of technology and testing to be able to use technology in EAP

assessment. EAP teachers need the assistance and attention of EAP educational authorities to improve their testing abilities and approaches. Furthermore, future research can be directed towards EAP teachers' attitudes toward the use of the Internet in EAP testing and assessment.

Although Web-based testing can contribute to fostering students' attitudes towards testing and EAP learning of academic vocabulary, students' perspectives towards the use of Web-based tests in EAP contexts can guide EAP teachers and course designers to a more comprehensive understanding of the shortcomings of Web-based tests. Technophobia and anxiety caused by the use of technology in testing can be a significant obstacle from the perspectives of the majority of participants in this study. Meanwhile, this anxiety might be linked to students' lack of knowledge of computers and technology. Students' lack of computer and Internet literacy can demotivate and discourage them from using technology for their learning. Teachers can play a pivotal role in fostering students' computer literacy in this regard. Moreover, computer training workshops can be proposed for EAP students in their educational institutions. Training for the use of technology, especially the Internet, can assist students to improve their computer literacy and adopt a more positive attitude towards technology. Although many students may be competent in the use of technology for their daily lives, the majority of them might not be familiar with the use of technology for academic and learning purposes. This issue necessitates the inclusion of constant technology training for EAP students. This responsibility should be held by both teachers and educational supervisors.

The provision of appropriate feedback can further create some concerns for EAP students when they use the Web-based test. One of the main problems with Web-based tests is the issue of feedback provision. Ideally, the type of feedback can be determined based on the needs and perceptions of EAP students. Additionally, teacher-generated feedback can be provided to compensate for the shortcomings of computer-generated feedback. Hutchinson and Waters (1987) warn that course designers of EAP should pay specific attention to the limitations of EAP courses and instruction. Most of these limitations are situation-based and can be identified and taken into consideration through investigation and needs assessment projects. Technology-related limitations should be detected and accommodated immediately since their existence can cause discouragement on the part of students.

Furthermore, the results showed that the EAP students enjoyed high levels of self-efficacy in using WBTs. This also shows that students are confident in using WBTs. It provides a clue to the high motivation of EAP students to take WBTs. Computer self-efficacy is closely related to students' confidence to use computers. Students who believe to have low

self-efficacy to use computers and technology may have limited abilities to use technology efficiently (Sam, Othman, & Nordin, 2005). If teachers can promote the sense of self-efficacy in their students, they can assist students to foster their computer literacy and attitudes as well. Taking into account students' positive attitudes and high levels of self-efficacy, it is recommended that EAP teachers and course designers respond to this need of EAP students through planning measures and strategies to facilitate the inclusion of computer-based and web-based tests in Iranian students' learning experiences.

Finally, more local and context-based research is required regarding comparability of computer-based and web-based tests to Iranian EAP students' needs. More attention should be directed towards identifying students' and teachers' preferences and perceptions regarding the use of computers and the Internet in EAP testing. Also, more research is needed on exploring the types of support that EAP students and teachers need to include computer-based and Internet-based tests and instruction in their EAP courses.

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